

Remarks

I. Introduction

This is in response to the Office Action dated June 27, 2008.

The Office Action rejected claims 1-9, 11, 12, 14-22, and 26-28 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,649,001 to Thomas et al. ("Thomas") in view of U.S. Publication No. 2001/0037491 to Boggs et al. ("Boggs"). Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas in view of Boggs further in view of Cisco Systems. Claims 13 and 29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas in view of Boggs further in view of U.S. Patent No. 6,978,319 to Rostoker et al. ("Rostoker"). Claims 23-25 and 30-32 were rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas in view of Boggs further in view of U.S. Publication No. 2003/0167391 to Al-Ali ("Al-Ali").

In response, claims 1, 2, 9, 14, and 26 have been amended. Claims 1-32 remain for consideration.

II. Rejections under 35 U.S.C. §103

In order to "establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art." In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Furthermore, "all words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). See also MPEP § 2143.03. Neither of the cited references, either alone or in combination, teach all of the claim limitations of currently amended independent claims 1, 2, 9, 14, and 26. Therefore, Applicants request the withdrawal of the rejection of independent claims 1, 2, 9, 14, and 26 under 35 U.S.C. §103(a).

The subject area of the present invention relates generally to a device, system, and method for the automatic configuration of a network communication

device. In one embodiment a programmable cable is adapted to configure a network communications device. The programmable cable has one end connectable to a PLC and another end connectable to the network communications device.

Figure 1 of the present application depicts a block diagram of an exemplary embodiment of system 1000 which is described in the specification in paragraphs 5 and 6. System 1000 can comprise a programmable cable 1100 having a first end 1101 couplable to network 1200 and a second end 1102 connectable to network communications device 1300. Network 1200 is couplable to computer 1400, such as a programmable logic controller (PLC) via network connection cable 1450. The last sentence of paragraph 6 of the present application states that "[i]n an alternative exemplary embodiment, PLC 1400 can be directly connectable through an intrinsic RS485 connection port to first end 1101 of programmable cable 1100.

Therefore, in one embodiment, a programmable cable has one end directly connectable to a PLC and another end connected to a network communications device. These aspects are claimed in currently amended independent claim 2 which includes the limitations of "a programmable cable comprising a first end directly connectable to and communicable with a programmable logic controller (PLC) and a second end connectable to a network communications device." Thomas and Boggs, either alone or in combination, fail to disclose this limitation of currently amended independent claim 2.

Thomas discloses a method and apparatus for adapting a communication interface device to multiple networks. Column 7, lines 46-51 of Thomas state that

[t]he instant invention is directed to a reconfigurable communication interface device and an associated communication adapter cable. The purpose of the invention is to allow a computer or other device to be connected to a wide variety of communication networks or devices simply by replacing the communication adapter cable.

Figure 1 of Thomas depicts a communication interface device 20 connected to one end of communication adapter cable 22 via universal connector 26. The other end of communication adapter cable 22 is connected to communication network/device 28 via network connector 30.

Column 7, lines 51-59 of Thomas state that

As used within this application, "communication interface device" refers to a device which connects a computer or other peripheral to a communication network. In the context of wire line or cellular networks, the communication interface device is often a modem. In the context of other types of networks, the communication interface device is typically a digitally switched networking card which resides in the computer or other peripheral.

Column 8, lines 43-59 of Thomas state that

It will be understood that communication network 28 can be any type of communication network. For example, telephone networks, cellular networks, Ethernet networks, PBX networks, ISDN networks, optical networks, or LAN and WAN type networks may be utilized with this device. In addition, communication network 28 may also be a cellular phone type network. In such an instance, communication adapter cable 22 would be connected to a cellular phone which would then provide access into the cellular communication network. Finally, communication network 28 may also be a voice acoustic coupler which can be utilized to tap into a standard telephone network.

The portions of Thomas cited above indicate that communication interface device 20 depicted in Figure 1 of Thomas may be a modem or a networking card. In addition, the portions of Thomas cited above indicated that communication network/device 28 may be a communication network, such as a cellular network or an Ethernet network. It follows that Figure 1 of Thomas depicts a communication adapter cable connectable between either a modem and a communication network or a network card and a communication network. The communication adapter cable 22 of Thomas does not have one end directly connectable to a PLC. Accordingly, Thomas does not disclose, show, or suggest a programmable cable connectable between a PLC and a network

communications device with one end directly connectable to the PLC, as required by independent claim 2.

Communication adapter cable 22 is shown in Figure 1 of Thomas connected between communication interface device 20 and communication network/device 28 and not between communication interface device 20 and a PLC. Although Figure 1 of Thomas shows a computer interface 24, which connects communication interface device 20 and a computer, there is no suggestion in the specification of Thomas that communication adapter cable 22 could be used as computer interface 24. As described at Column 7, lines 63 – 67 of Thomas, “computer interface 24 is the means by which communication interface device 20 communicates with the computer or other peripheral to which the interface device is attached.” There is no suggestion in Thomas that communication interface 24 is a programmable cable. Thus, Thomas does not describe any programmable cable directly connecting the communications interface device and a computer.

Therefore, Thomas fails to disclose “a programmable cable comprising a first end directly connectable to and communicable with a programmable logic controller (PLC) and a second end connectable to a network communications device” as recited in amended independent claim 2.

Boggs fails to disclose the limitation missing from Thomas. Boggs discloses a programmable logic controller method, system, and apparatus. Fig. 37A of Boggs depicts a master PLC M connected to a plurality of slave PLCs R1-Rn. Figure 37B in conjunction with paragraph [0010] of Boggs indicates that each PLC includes Modem 3710 for carrying out communications between the master PLC and the slave PLCs. Boggs does not disclose a programmable cable used to connect each modem 3710 to its associated PLC. In fact, Boggs does not even disclose how each modem 3710 is connected to its associated PLC. Thus, Boggs fails to provide the limitation of “a programmable cable comprising a first

end directly connectable to and communicable with a programmable logic controller (PLC) and a second end connectable to a network communications device" as required by currently amended independent claim 2.

Another aspect of the present invention is the storage of a PIN number, associated with a network communications device such as a remote modem, in the programmable cable. As explained in paragraph 3 of the present application, a power failure can cause a remote modem to restart which may subsequently require a password or other security code to be entered before the remote modem can be utilized. Paragraph 16 of the present application describes an embodiment of the present invention in which a PIN number is supplied by programmable cable 1100 to network communications device 1300 to allow operation of the network communications device 1300.

This aspect of storing a PIN number associated with a communications device in the programmable cable and supplying the PIN to the communications device in order to enable the network communication device is claimed in currently amended independent claim 2 which includes the limitation of "said programmable cable adapted to automatically configure the network communications device by communicating the at least one of the plurality of configuration parameters and a PIN number associated with the network communications device to the network communications device to enable the network communications device to function." Thomas and Boggs, either alone or in combination, fail to disclose this limitation of currently amended independent claim 2.

Paragraph 5 of the present Office Action states that the PIN number of claim 2 is disclosed by Thomas in column 10, lines 47-59. However, this section of Thomas states that "[i]n one preferred embodiment, communication adapter cable 22 comprises means to store a communication adapter cable identification code." Column 6, lines 18-20 of Thomas provides an indication of how the

identification code is used stating that “[t]he communication interface device is designed to verify that the identification code represents a valid communication adapter cable.”

Clearly, the identification code disclosed in Thomas is associated with the communication adapter cable and not the network communication device as required by amended independent claim 2. The identification code of Thomas is used to show the communication device that the adapter cable is valid. There is no description of the identification code enabling the communications device to function. Therefore, Thomas fails to disclose “said programmable cable adapted to automatically configure the network communications device by communicating the at least one of the plurality of configuration parameters and a PIN number associated with the network communications device to the network communications device to enable the network communications device to function” as recited in independent claim 2. The Office Action does not rely on Boggs to provide this limitation. Further, Boggs also does not disclose this limitation of independent claim 2.

Thus, for the reasons stated above, Thomas and Boggs, either alone or in combination, fail to disclose each and every limitation of independent claim 2 as amended. Therefore, independent claim 2 is allowable over the cited art.

Independent claim 1 contains a limitations similar to the limitations of claim 2 discussed above with the exception that the term “cellular telephone modem” is used in place of the term “network communications device.” Thomas and Boggs, either alone or in combination, do not disclose “a programmable cable comprising a first end directly connectable to a programmable logic controller (PLC) and a second end connectable to said cellular telephone modem” as required by currently amended independent claim 1. Therefore, currently amended independent claim 1 is allowable over Thomas and Boggs.

The Office Action states that Thomas discloses a cellular telephone modem in column 3, lines 8-15. While the cited portion of Thomas states that "connecting to a cellular telephone often requires a modem configured specifically to attach to the desired type of telephone", this statement is made in the context of a problem the invention of Thomas proposes to solve which is described in column 3, lines 39-42 of Thomas which state that "[i]t would, therefore, represent an advancement in the art to provide the capability to interface a wide variety of cellular phone types from a single modem through greatly simplified adapters." This section of Thomas does not describe a programmable cable with one end directly connectable to a programmable logic controller (PLC) and another end connectable to a cellular telephone modem. Further, at no point does Thomas disclose "a programmable cable comprising a first end directly connectable to a programmable logic controller (PLC) and a second end connectable to said cellular telephone modem," as recited in independent claim 1, as amended.

For the reasons discussed above in connection with claim 2, Thomas also fails to disclose the limitations of "said programmable cable adapted to store a plurality of configuration parameters and a PIN number associated with the cellular telephone modem" and "said programmable cable adapted to automatically configure said cellular telephone modem by communicating at least one of the configuration parameters and the PIN number to said cellular telephone modem to enable the cellular telephone modem to function" as recited by amended claim 1.

For reasons stated above in connection with independent claim 2, Boggs does not disclose "a programmable cable comprising a first end directly connectable to a programmable logic controller (PLC) and a second end connectable to said cellular telephone modem", "said programmable cable adapted to store a plurality of configuration parameters and a PIN number associated with the cellular telephone modem" and "said programmable cable

adapted to automatically configure said cellular telephone modem by communicating at least one of the configuration parameters and the PIN number to said cellular telephone modem to enable the cellular telephone modem to function" as recited in independent claim 1. Since, Thomas and Boggs, either alone or in combination, fail to provide each and every limitation of currently amended independent claim, currently amended independent claim 1 is allowable over the cited art.

The Office Action rejected independent claim 14 under 35 U.S.C. 103(a) over Thomas in view of Boggs. Independent claim 14 contains limitations similar to the limitations discussed above in connection with independent claim 2. Therefore, Independent claim 14 is allowable for the reasons provided above in connection with independent claim 2.

The Office Action rejected independent claim 9 under 35 U.S.C. 103(a) over Thomas in view of Boggs. Independent claim 9 includes the limitation of "a programmable cable comprising, a first end connectable to a network couplable to a programmable logic controller (PLC), and a second end connectable to a network communication device." Thomas and Boggs, either alone or in combination, fail to disclose each and every limitation of independent claim 9. Therefore, independent claim 9 is allowable.

Fig. 1 of Thomas depicts communication interface device 20 connected through communication adapter cable 22 to communication network/device 28. However, nowhere does Thomas disclose that the network is couplable to a PLC as required by independent claim 9. Further, Boggs does not disclose a programmable cable, no less one connected to a network couplable to a PLC. Therefore, neither Thomas nor Boggs disclose "a programmable cable comprising, a first end connectable to a network couplable to a programmable logic controller (PLC), and a second end connectable to a network communications device" as recited in independent claim 9.

Independent claim 9 has also been amended to include the limitation of "said programmable cable programmable to store a PIN number associated with the network communications device, said PIN number required to enable the network communications device to function." This limitation is not disclosed in either Thomas or Boggs for reasons described above in connection with claim 2. Thus, Thomas and Boggs, either alone or in combination, fail to disclose each and every limitation of currently amended independent claim 9. Therefore, currently amended independent claim 9 is allowable over the cited art.

The Office Action rejected independent claim 26 under 35 U.S.C. 103(a) over Thomas in view of Boggs. Independent claim 26 includes the limitation of "providing a programmable cable comprising a first end operatively connectable to a network and a second end operatively connectable to a network communications device,...said network comprising the programmable cable, a programmable logic controller (PLC), and the network communications device." Fig. 1 of Thomas depicts communication interface device 20 connected through communication adapter cable 22 to communication network/device 28. However, nowhere does Thomas disclose that the network comprises a PLC as required by independent claim 26. Further, Boggs does not disclose a programmable cable, no less one connected to a network comprising a PLC. Thus, Thomas and Boggs, either alone or in combination, fail to disclose, "providing a programmable cable comprising a first end operatively connectable to a network and a second end operatively connectable to a network communications device,...said network comprising the programmable cable, a programmable logic controller (PLC), and the network communications device" as recited in independent claim 26.

Independent claim 26 has also been amended to include the limitation of "associated with the network communications device, said PIN number required to enable the network communications device to function" which is not disclosed in Thomas or Boggs for reasons discussed above in connection with claim 2.

Thus, Thomas and Boggs, either alone or in combination, fail to disclose each and every limitation of currently amended independent claim 26. Therefore, currently amended independent claim 26 is allowable over the cited art.

For the reasons discussed above, independent claims 1, 2, 9, 14, and 26 are allowable over the cited art. All remaining dependent claims are dependent upon an allowable independent claim and are therefore also allowable.

III. No New Matter has Been Added

The amendments to claims 1, 2, 9, 14, and 26 do not add new matter. Support for the amendments can be found at least in the Specification in paragraphs 3, 6, 24, and 25.

IV. Conclusion

For the reasons discussed above, all pending claims are allowable over the cited art. Reconsideration and allowance of all claims is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jose R. de la Rosa', is written over a horizontal line.

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